



JMPS-M

External Interfaces



Outline

- What does the term External Interface mean?
- How do External Interfaces relate to External Dependencies?
- Who is working External Interfaces?
- Why are we working External Interfaces?
- How is NAVAIR WD set up to support JMPS-M (Maritime) External Interfaces?



JMPS-M External Interfaces POC



- Ancina Stevens
 - JMPS Maritime External Interfaces Coordinator
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External Interface Defined

- External
 - Not intrinsic or essential
 - Of or relating to dealings or relationships with foreign organizations
- Interface
 - The place which independent systems meet and act on or communicate with each other
 - Common boundary between two or more items of equipment



External Interface Defined

- JMPS External Interface
 - Connection between JMPS framework or JMPS common components and an independent system or piece of data
 - Not part of basic JMPS mission planning
- Major External Interface Categories
 - System
 - Software (requires software, provided or developed, on JMPS)
 - Browser (requires only a Browser on JMPS)
 - Data
 - Flat file, XML file, various media types
 - NIMA products, GPS Almanac, etc.



External Interface Process



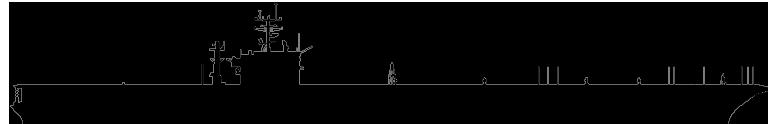
- PMA-233/NAVAIR WD oversight
- Forum for information exchange
- Lay the groundwork for JMPS External Dependency roadmap

Ancina Stevens is the JMPS External Interfaces Cat Herder!



External Interface Process

- Focus on JC1 carrier-based interfaces first
- Expand to include Navy Expeditionary OPS interfaces next

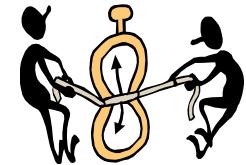




External Interface Challenges



- Many external systems and data
 - Multiple external program offices and contractors
 - 'Squeaky wheel gets the grease'
 - Priorities should be driven by user requirements
 - Agreements (some firm...some loose)
- Funding
 - Especially life cycle maintenance support of the software providing the interface (both sides)
- Schedule synchronization
 - Everyone's schedule changes (both sides)
- Technical issues, including inter- and intra-ship/shore connectivity





Schedule Synchronization



- Schedule
 - Development
 - Difficult enough
 - Fielding
 - Sometimes impossible due to the D-30 process for ship installations



Sometimes 'close enough' is the best you can achieve.



System Development

- External interfaces
 - Implementation of certain system requirements
- Oversight of external interfaces
 - Spans the entire system development life-cycle
 - Covers all aspects of system development
 - Hardware
 - Software
 - Documentation
 - Data support

Requirements->Design->Development->Test->Fielding



JMPS External Interface Tasks



- Requirements
 - Become familiar with ORD and basic user requirements and be on the lookout for ways to satisfy those requirements
- Design/Development
 - Identify POCs for technical information
 - Review system-level documentation
- Test
 - Perform testing, when needed
 - Identify external system hardware and software required for testing the interface or facilitate a remote connection
- Care and Feeding
 - Perform a routine pulse check on existing and potential external interfaces and document risks, problem areas, etc.
- Library
 - Compile an electronic library for all external interfaces and update monthly



System Integration

- JC1 System Integration Phases
 - Planning
 - Execution
 - Assessment



JMPS JC1 Integration Tasks

	Planning Phase	JC1 Integration Execute Phase	Assessment Phase
JMPE	<ul style="list-style-type: none">• Prepare Integration Plan• Identify test hardware suite• Analyze source code issues• Analyze DRs	<ul style="list-style-type: none">• Analyze defects/metrics• Recommend test focus	<ul style="list-style-type: none">• Waiver assessments• Prepare final report
CM	<ul style="list-style-type: none">• Prepare CM Plan• Build JMPS CD (all configs)• Baseline Core software	<ul style="list-style-type: none">• Inject patches into baseline• Rebuild/reinstall systems• Troubleshooting	
UPC	<ul style="list-style-type: none">• Prepare UPC Integration Plan	<ul style="list-style-type: none">• UPC coordination/assist	<ul style="list-style-type: none">• UPC evaluation forms
Ext. Sys.	<ul style="list-style-type: none">• Identify external systems• Obtain external systems• Install/Config. External systems	<ul style="list-style-type: none">• Maintain external systems	
Test	<ul style="list-style-type: none">• Prepare Integration test plan• Prepare test point matrix	<ul style="list-style-type: none">• Perform integration test• Capture defects• Collect metrics	<ul style="list-style-type: none">• Test Perf. Assessment
QA	<ul style="list-style-type: none">• Prepare Integration QA plan• Peer Review Integration plans	<ul style="list-style-type: none">• Verify entry criteria met• Verify defect reports• Verify exit criteria met	

■Artifact

■Task



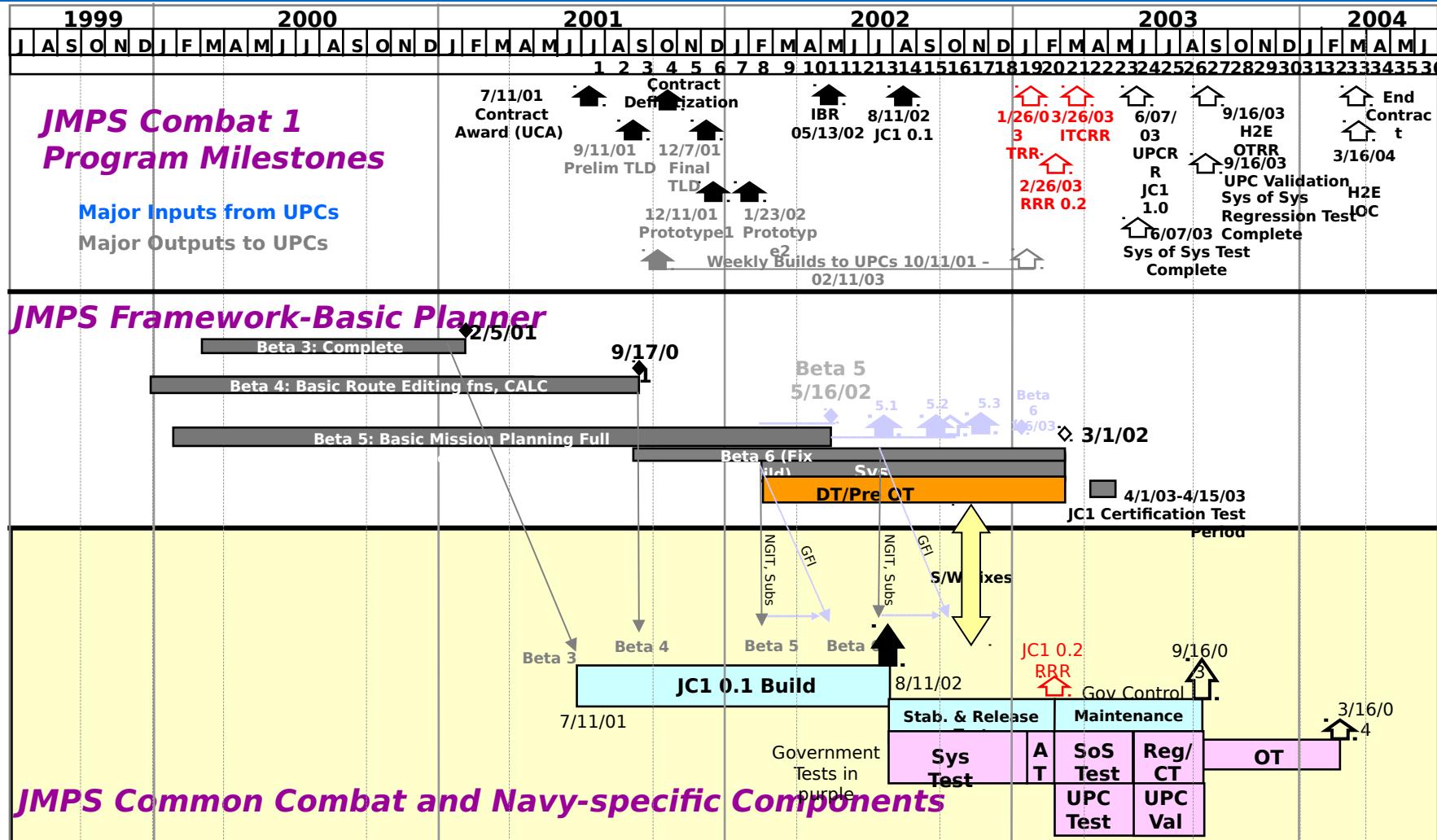
JMPS JC1 Integration Tasks

	Planning Phase	JC1 Integration Execute Phase	Assessment Phase
JMPE	<ul style="list-style-type: none">• Prepare Integration Plan• Identify test hardware suite• Analyze source code issues• Analyze DRS	<ul style="list-style-type: none">• Analyze defects/metrics• Recommend test focus	<ul style="list-style-type: none">• Waiver assessments• Prepare final report
CM	<ul style="list-style-type: none">• Prepare CM Plan• Build JMPS CD (all configs)• Baseline Core software	<ul style="list-style-type: none">• Inject patches into baseline• Rebuild/reinstall systems• Troubleshooting	
UPC	<ul style="list-style-type: none">• Prepare UPC Integration Plan	<ul style="list-style-type: none">• UPC coordination/assist	<ul style="list-style-type: none">• UPC evaluation forms
Ext. Sys.	<ul style="list-style-type: none">• Identify external systems• Obtain external systems• Install/Config. External systems	<ul style="list-style-type: none">• Maintain external systems	
Test	<ul style="list-style-type: none">• Prepare Integration test plan• Prepare test point matrix	<ul style="list-style-type: none">• Perform integration test• Capture defects• Collect metrics	<ul style="list-style-type: none">• Test Perf. Assessment
QA	<ul style="list-style-type: none">• Prepare Integration QA plan• Peer Review Integration plans	<ul style="list-style-type: none">• Verify entry criteria met• Verify defect reports• Verify exit criteria met	

- Artifact
- Task



JMPS Master Schedule (pre-Jan 2003)





JMPS Schedule

4 JAN 03



- Expectation: No un-mitigated PR 1, 2's, spec 3 & 4s
- Entry: MTBOMF \geq 30 hrs

**JV1 (CLIN 100-
100)**
Rs=32,
IPRs=65)

9/23 12/2 12/6 12/13
5.2 5.3

NGIT
Freeze
Baseline
1/20
5.3A

1/31

2/7

B6.

Same RLS criteria as any other beta

3/17 3/31 4/14

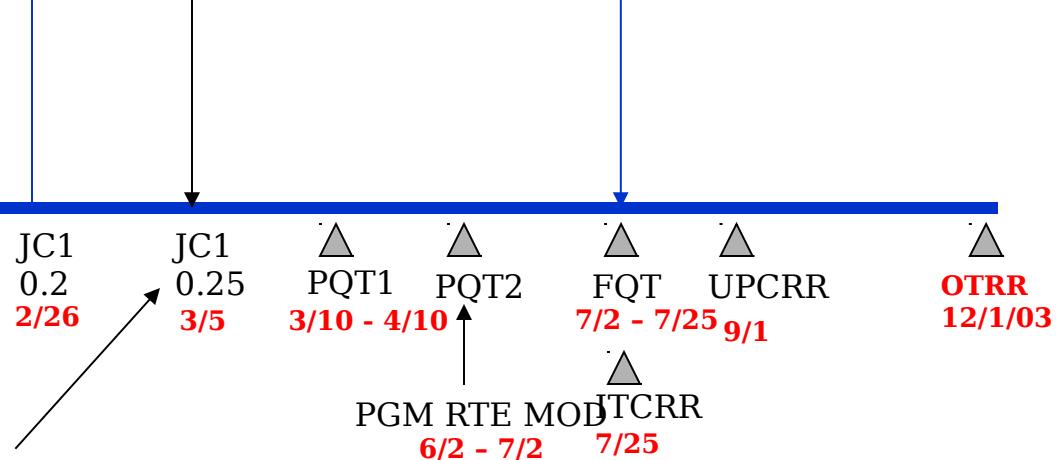
JV1 (CLIN 132)
(GDRs=68,
IPRs=69)

Fix capacity
for approx 325
PR's
(137 planned)

JC1

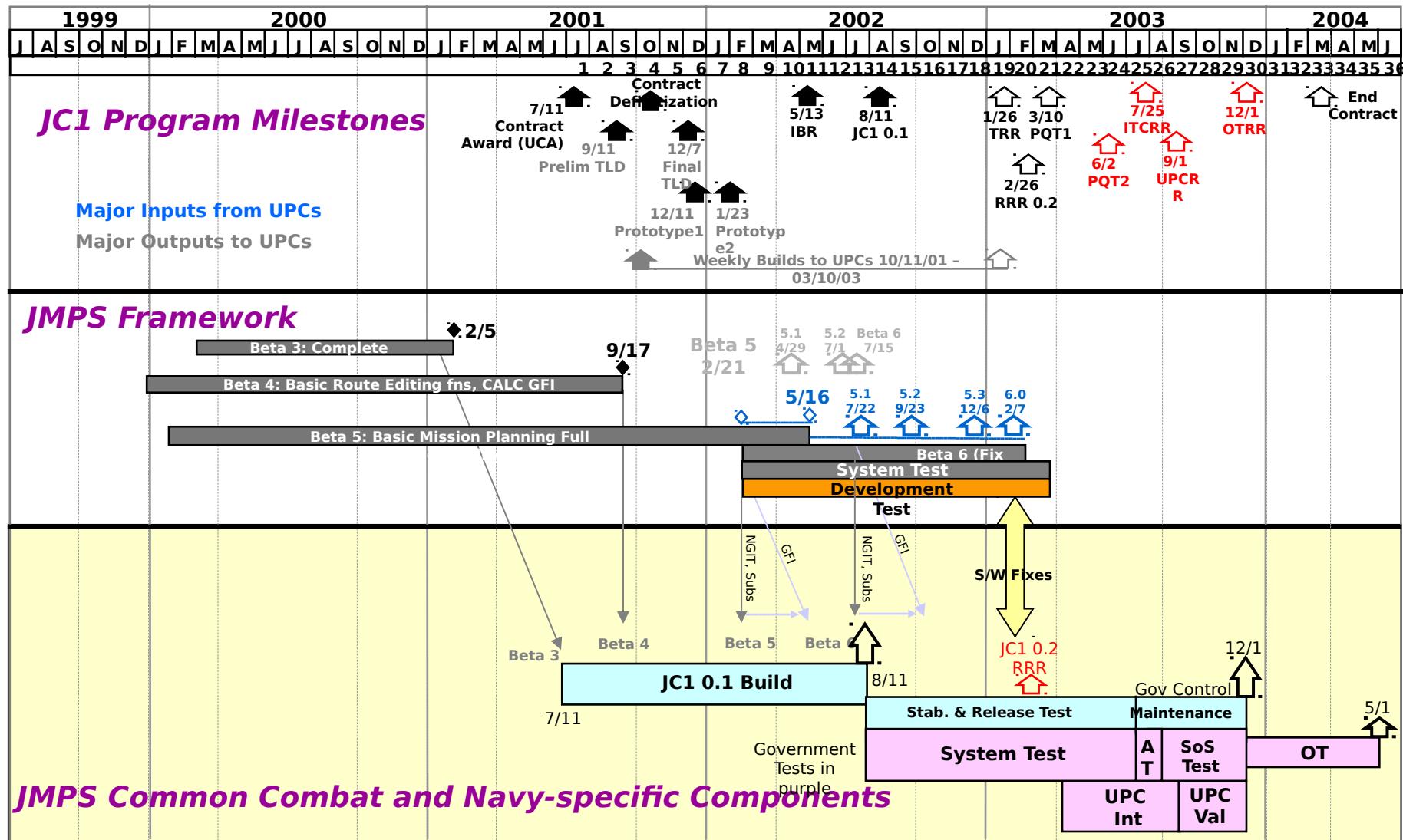
Based on JV1
B5.3

Based on JV1





JMPS Master Schedule (proposed - Jan 2003)





External Systems Test Schedule



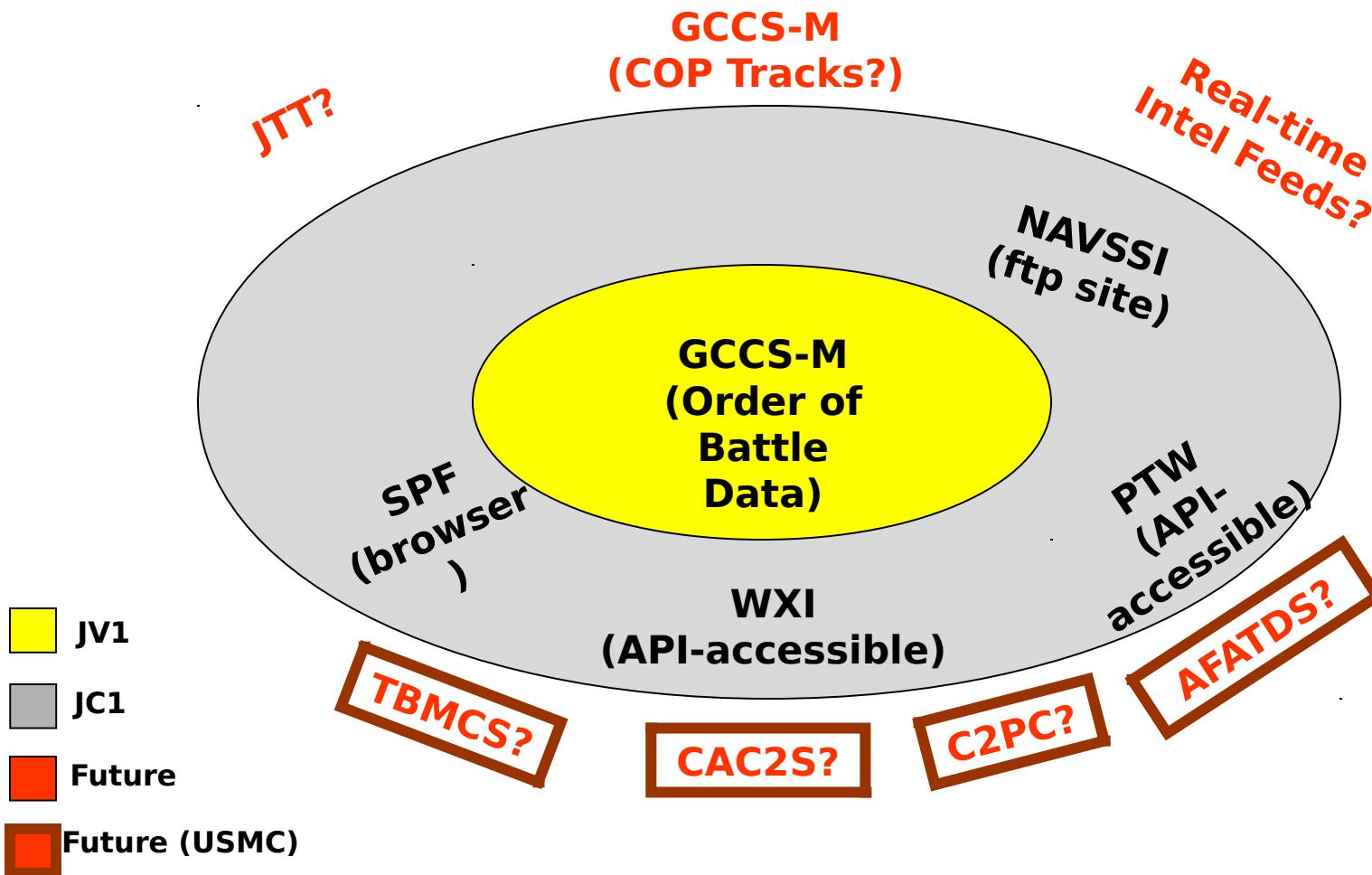
- JV1
 - From Beta 5 on, verify the JMPS/GCCS-M interface with each build being tested
 - Total of 8 JV1 builds from Aug 02 through Jan 03
- JC1
 - To be supplied



JMPS-M External Interfaces



JMPS-M External 'System' Interfaces

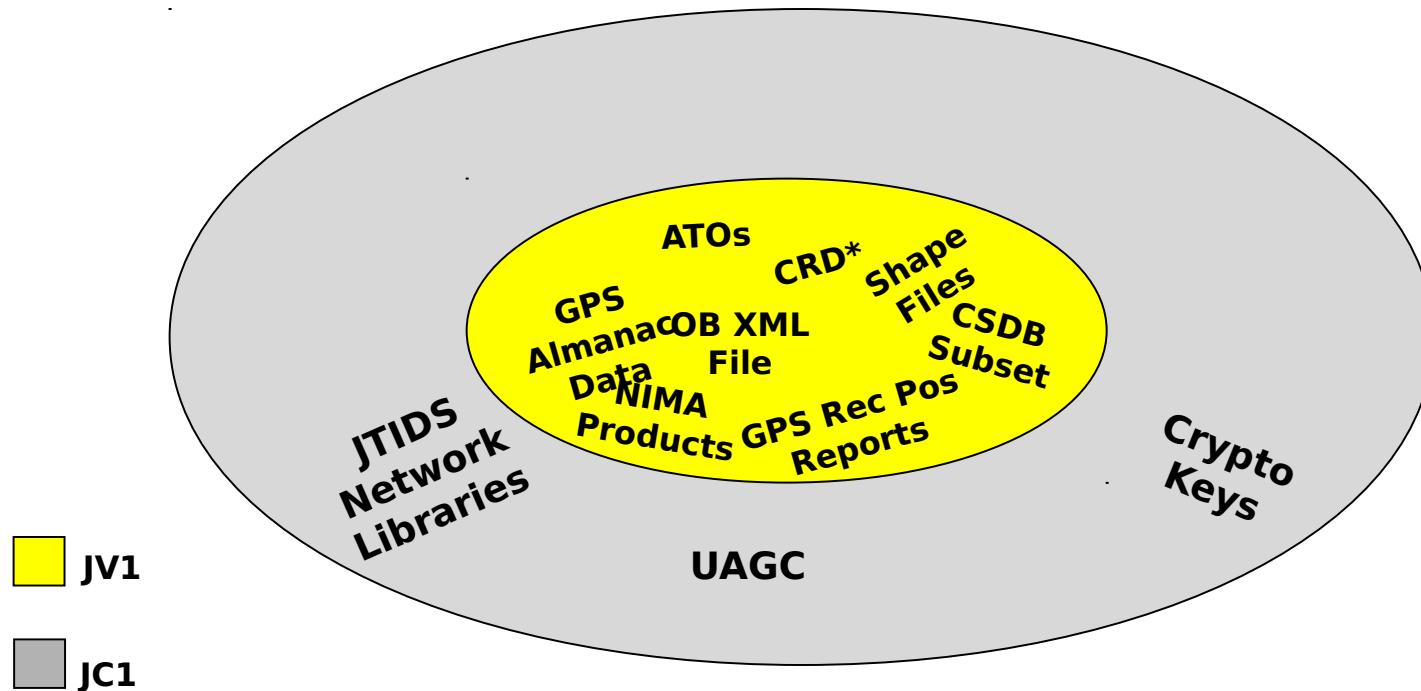




JMPS-M External 'Data' Interfaces



FPMs and Mission Binders?



*All are import data interfaces except CRD, which is both import and export.



JMPS External Interface POCs



- Navy
 - Ancina Stevens (Navy Coordinator)
 - Mary Collins (GCCS-M, Intel Data)
 - Matt Becker (NAVSSI, GPS Almanac Data)
 - Major Will Bentley (USMC Exp Ops)
 - Requirements still evolving
 - LCDR Pat Waring (METOC/NIMA)
 - China Lake IBAR Lab
 - Darin Martin
 - Point Mugu Lab
 - Joe Orosco



External Interface Summary

SYSTEM/DATA	DESCRIPTION	S/D	JV1	JC1	FUTURE	REQ	METHOD	J MPS POC	COMMENTS
AFATDS	Advanced Field Artillery Tactical Data System				X			Maj Will Bentley	Exp Ops
ATO/ACO/ATOCONF	USMTF Air Tasking Order, Air Combat Order, Air Tasking Order Confirmation Message	D	X	X				Matt Jensen	
C2PC	Command and Control PC				X			Maj Will Bentley	Exp Ops - related to GCCS Track Data
CAC2S	Common Aviation Command and Control System				X			Maj Will Bentley	Exp Ops
CRD	Common Route Definition	D	X	X				David Trott	
Crypto Keys		D						Stuart Stratton	
CSDB Subset	Combat System Data Base	D	X	X			File Import	Ancina Stevens	web site:
GCCS-M	Global Command and Control System-Maritime	S	X	X			J MPS GUI Request	Mary Collins	Currently only MOB (SAM, AAA) and EOB equipment
GPS ALMANAC	Global Positioning System Almanac Data	D	X	X				Matt Becker	Yuma and Navstar formats supported
GPS POSITS	Global Positioning System Position Reports	D	X	X			Data feed on COM port	Matt Becker	Precision Lightweight GPS Receivers (PLGRs) built since 1993 are supported in J MPS. Interface uses the NMEA-0183 industry standard GPS interface (serial port).
JNL	J TIDS Network Library				X			Ann Gross	
JTT	Joint Targeting Toolkit					X		Mary Collins	
NAVSSI	Navigation Sensor System Interface	S		X			J MPS GUI	Matt Becker	
NIMA MCG&I	National Imagery and Mapping Agency Mapping, Charting, Geodesy and Imagery	D	X	X				LCDR Pat Waring	
OB XML File	Order of Battle eXtensible Markup Language File	D	X	X			File Import	Mary Collins	
PTW	Precision Targeting Workstation	S		X			API ONLY	Ancina Stevens	
Real-time Data Feeds	Real-time Data Feeds					X		Mary Collins	PFPS 3.2 capability - Birddog Tools
SHAPEFILE		D	X	X				Sharon Spielman	
SPF	Strike Planning Folder	S		X			BROWSER	Ancina Stevens	
TBMCS	Theater Battle Management Core System				X			Maj Will Bentley	Exp Ops
TOPSCENE	Tactical OPeration SCENE							Ancina Stevens	Used as a test tool for CRD data exchange
WXI (METCAST)	METeorologic broadCAST	S		X			API ONLY	Ancina Stevens	
WXI (UAGC)	Upper Air Gridded Climatology			X				Ancina Stevens	

As of 27 Jan 2003



Test Procedures



SYSTEM/DATA	J V1	J C1	FUTURE	METHOD	NGIT TESTER	GOVT TESTER (J V1)
AFATDS			X			
ATO/ACO/ATOCONF	Manage ATO Data	Standalone Import/Export Standalone (Data Types) Server Walkaway			Cindy Nguyen	Stanley Lekowitz
C2PC			X			
CAC2S			X			
CRD	Exchange Mission Data	X	X		Lynn Diamond	David Tarrt
Crypto Keys						
CSDB Subset	Manage Threat Data	Standalone Import/Export Standalone (Data Types) Server Walkaway		File Import		Ancina Stevens
GCCS-M	Manage Threat Data	Standalone Import/Export Standalone (Data Types) Server Walkaway		J MPS GUI Request	Steve Allen	Ancina Stevens
GPS ALMANAC	Manage GPS Almanac	Update GPS Almanac Server Walkaway			Michael Chiang	Matt Becker
GPS POSITS	Manage GPS Almanac	Update GPS Almanac Server Walkaway		Data feed on COM port	Michael Chiang	Matt Becker
J NLL		Maintain J TIDS				Sharon Spielman
J TT			X			
NAVSSI		X		J MPS GUI		Matt Becker
NIMA MCG&I	Manage DAFIF Data				Richard Nguyen Jim Sra	
OB XML File	Manage Threat Data	Standalone Import/Export Standalone (Data Types) Server Walkaway		File Import	Steve Allen	Ancina Stevens
PTW		Interface to PTW Server Walkaway		API ONLY	Lynn Diamond	Steve Crawford
Real-time Data Feeds			X			
SHAPEFILE		Define Planning Workspace Server Walkaway				
SPF		Interface to SPF		BROWSER	Lynn Diamond	Steve Crawford
TBMCS			X			
TOPSCENE		Exchange Mission Data				David Tarrt
WXI (METCAST)		Weather Standalone Import/Export Standalone (Data Types)		API ONLY	Lynn Diamond	Erika Ocampo (to be reassigned)
WXI (UAGC)						
MISSION BINDERS		Mission Binders (MB) MB Backup/Restore Standalone Import/Export Standalone (Data Types) Server Walkaway			Michael Chiang	Joe Orosco

As of 27 Jan 2003



External Systems Non-JMPS POCS



SYSTEM/DATA	DESCRIPTION	PROGRAM POC	TECHNICAL POC	UPC PGM	ENGRG DROP	OT COMP	IOC
AFATDS	Advanced Field Artillery Tactical Data System						
ATO/ACO/ATOCON F	USMTF Air Tasking Order, Air Combat Order, Air Tasking Order Confirmation Message						
C2PC	Command and Control PC						
CAC2S	Common Aviation Command and Control System						
CRD	Common Route Definition						
Crypto Keys							
CSDB Subset	Combat System Data Base						
GCCS-M	Global Command and Control System-Maritime	Will Landenberg (610)260-4217 / (610)662-4390	Donna Snow (NGIT-Phila) (610)260-4264	All PGMs			
GPS ALMANAC	Global Positioning System Almanac Data						
GPS POSITS	Global Positioning System Position Reports						
JNL	JTIDS Network Library						
ITT							
NAVSSI	Navigation Sensor System Interface	Patrick Truver (PMM-156) (619) 524-7767	Ladd McCoy ladd.mccoy@titan.com				
NIMA MCG&I	National Imagery and Mapping Agency Mapping, Charting, Geodesy and Imagery						
OB XML File	Order of Battle eXtensible Markup Language File						
PTW	Precision Targeting Workstation	Carl Rhoad (PMA 281) (703)866-4000	Brad Cordill (BAE) (858) 592-5358	SLAM JSOW			
Real-time Data	Real-time Data Feeds						
SHAPEFILE							
SPF	Strike Planning Folder	Matt Worthington (PMA 281) (703) 414-3858	J erald Barker (BAE) (858) 592-5662				
TBMCS	Theater Battle Management Core System						
TOPSCENE	Tactical OPeration SCENE	Alan Herod (PMA 205) (301) 757-8136	Steve Perkins (Lockheed) (972) 603-9001				
WXI (METCAST)	METeorologic broadCAST	Pat Waring (NAVAIR) (301) 342-0086 waringpl@navair.navy.mil		JSOW			
WXI (UAGC)							b

As of 27 Jan 2003



IBAR External Systems

SYSTEM	DESCRIPTION	TYPE (QTY)	SOFTWARE VERSION(S)
C2PC	Command and Control PC	GCCS-M 3.x client	
GCCS-M	Global Command and Control System-Maritime	GCCS-M 3.x Server GCCS-M 4.2 Server	3.1.2.1 4.X
PTW	Precision Targeting Workstation	PTW Server (3) PTW Heavy Client (2) PTW Thin Client (2) PTW Rack Mount (1)	3.2 - 4.1 - 4.1.1a 4.1 - 4.1.1a 4.1 - 4.1.1a 4.1.1a
SPF	Strike Planning Folder	PTW Server 4.01 PTW Server 4.1	SPF SPF Build 6

As of 27 Jan 2003



GCCS-M



- **Global Command Control System - Maritime (GCCS-M)** is a single, integrated, scaleable Command, Control, Communication, Computer, and Intelligence (C4I) system that receives, displays, correlates, fuses and maintains geo-locational track information on friendly, hostile, and neutral land, sea and air forces and integrates it with available intelligence and environmental information.

GCCS-M/JV1 Interface - allows JMPS users with DBA role to query for current threat Order of Battle data (SAM, AAA, and EOB equipment) from GCCS-M's tactically-relevant MIDB and returns the results in XML. This results can then be saved to the JMPS database and made available to all JMPS users and UP Cs.



NAVSSI



- The AN/SSN-6 **Navigation Sensor System Interface (NAVSSI)** system is an integrated shipboard system that automatically accepts, processes, and disseminates navigation and time information from various shipboard navigation sources. The AN/SSN-6 provides a means for mission planners to obtain data verification, digital mapping, and the programming of selected way points. One of the navigation data products includes a GPS almanac file NAVSTAR.alm. This almanac data is used by platforms that require GPS navigation.

NAVSSI/JC1 Interface - allows a JMPS user to download current GPS Almanac data from a NAVSSI ftp site on a LAN/WAN.



PTW



- **Joint Service Imagery Processing System - Navy (JSIPS-N)**
Precision Targeting Workstation (PTW) provides imagery, Mission Target Folders and other targeting information to assist the planner in generating missions.

PTW/JC1 Interface – allows a JMPS UPC to query for the following products:

- EO, IR, and SAR Imagery (NITF 2.0 Expanded Format)
- Automated Target Acquisition (ATA) Images
- Point Position Information Products (PPIP)
- Target Area Model (TAM) Images*
- Target Folders with Visual Targeting Aids (VTS) and/or ATA Images

The **PTW/JC1** interface also supports ATA product generation requests and the exporting of retrieved products to UPC directories.

There is no user interface in JMPS related to the PTW interface. It can only be used programmatically by a UPC. A test driver, provided by BAE Systems, is used for testing prior to UPCs being available.

*Note: TAM Images SWA and ER are supported by JSIPS/Navy and expected to use the PTW interface.



SPF



- **Strike Planning Folder (SPF)** functions as a mission/data repository storing routes, threat information, intelligence, weather, Air Tasking Orders (ATO), Rules of Engagement (ROE), and briefing material. Routes are stored in SPF in the Common Route Definition (CRD) format.

SPF/JC1 Interface - allows JMPS users to access, view, and use information held in the SPF repository via a Web Browser. There really is no interface of data to/from SPF except what can be done using normal Windows functionality.



WXI (METCAST)

- **METeorologic broadCAST (METCAST)** is a request-reply and subscription system for distributing weather information extracted from the Tactical Environment Data Server (TEDS) database.

METCAST/JC1 Interface - allows a JMPS UPC to query for current and forecasted weather data.

There is no user interface in JMPS related to the METCAST interface. It can only be used programmatically by a UPC. A test driver, provided by BAE Systems, is used for testing prior to UPCs being available. Currently, the JSOW UPC is expected to use the JMPS interface for METCAST data.



Additional ‘Systems’



- TOPSCENE
- TAMPS
- PFPS



TOPSCENE

- **Tactical Operational Scene (TOPSCENE)** is a 3-dimensional (3-D) scene generator used to simulate the route of flight. The system generates a dynamic 3-D representation based on specific route information, ground elevation data, imagery and threat data.

TOPSCENE can import routes in CRD format and is used for testing JMPS CRD export functionality in JMPS.



JMPS/GCCS-M Interface



JMPS/GCCS-M Interface



- Requirement
 - Electronic interface to GCCS-M for the purpose of obtaining current GCCS-M threat data
 - Electronic Order of Battle
 - Radar equipment
 - Missile Order of Battle
 - Surface-to-Air Missile (SAM) equipment
 - Anti-Aircraft Artillery (AAA) equipment

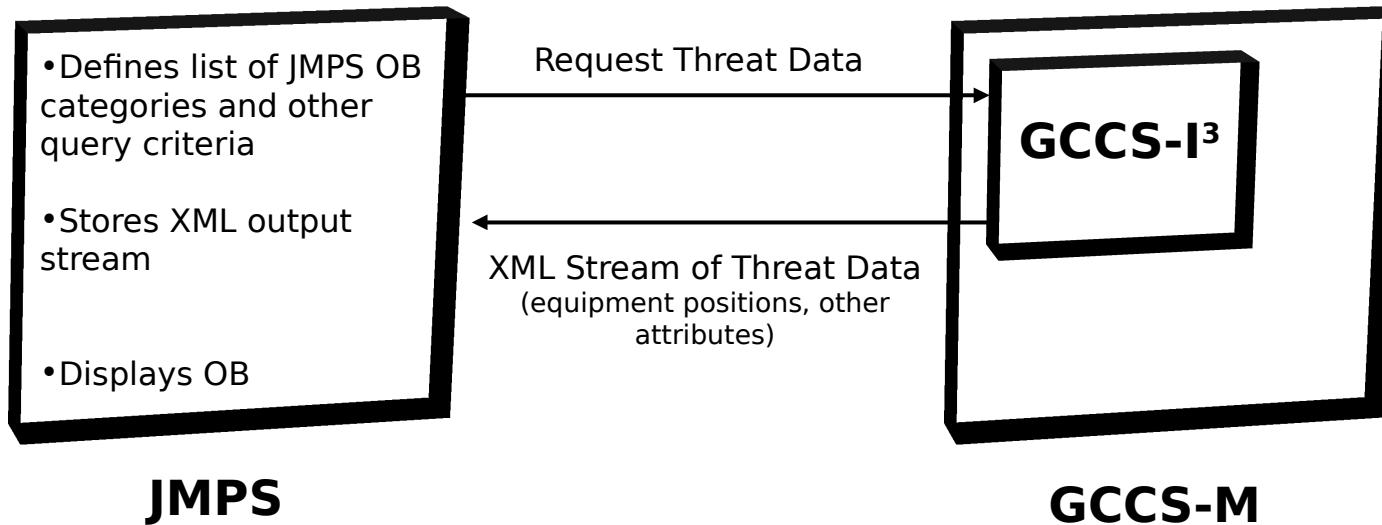


JV1/GCCS-M Interface

- Interface to GCCS-M from JMPS
 - The GCCS-M Data Access Layer XMLSearch API is used by the JMPS software to request the required threat data across the LAN
 - Not currently available to the mission planner without giving the planner additional privileges
 - Ultimate source of the data is the equipment portion of the GCCS-M MIDB data base
- Processing of the Data on JMPS
 - Upon receipt of the threat data, JMPS saves the threat data set for subsequent use by the mission planner
 - More than a single 'GCCS-M-generated' data set can be saved
- Usage of the Data on JMPS
 - Available to mission planner as a data set that can be used within a planning session

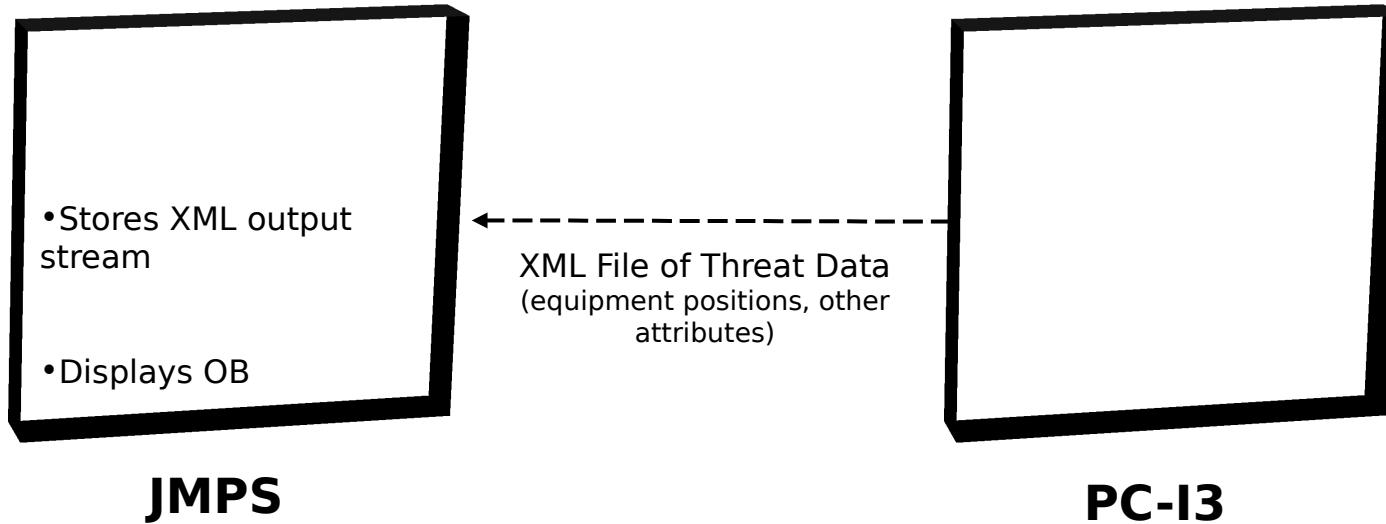


JV1 Implementation (Navy CONOPS)





JV1 Implementation (Air Force CONOPS)



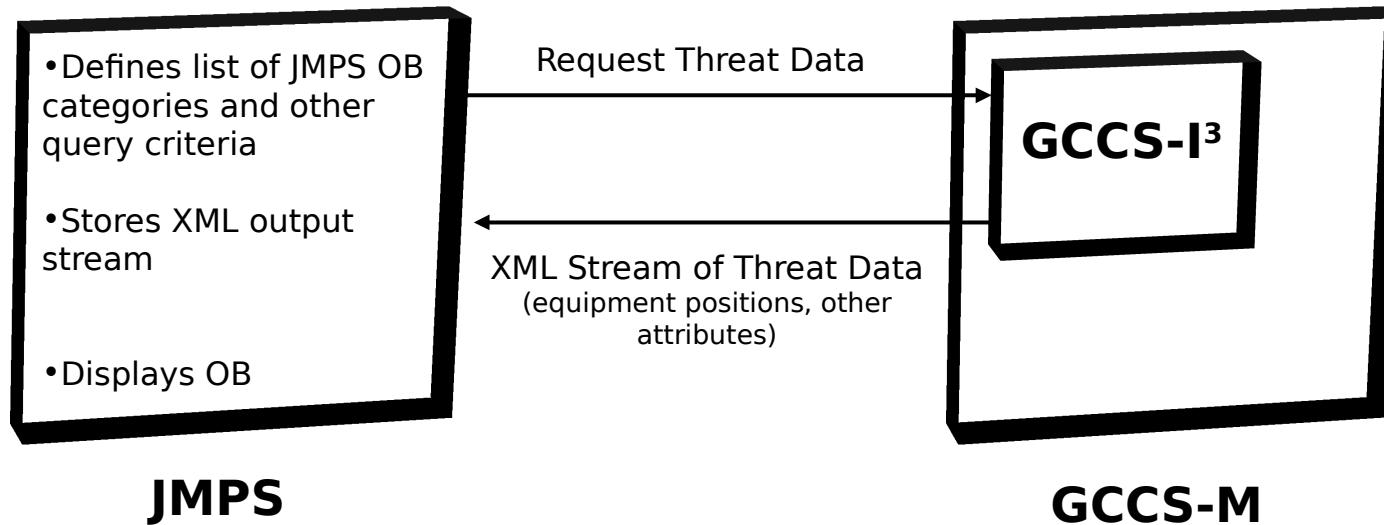


JC1/GCCS-M Interface

- Interface to GCCS-M from JMPS
 - A revised GCCS-M Data Access Layer XMLSearch API is used by the JMPS software to request the required threat data across the LAN
 - Not currently available to the mission planner without giving the planner additional privileges
 - Ultimate source of the data is the equipment portion of the GCCS-M MIDB data base
 - The BE_NUMBER and CATEGORY elements of any associated facilities are also planned to be retrieved
- Processing of the Data on JMPS
 - Upon receipt of the threat data, JMPS saves the threat data set for subsequent use by the mission planner
 - More than a single 'GCCS-M-generated' data set can be saved
- Usage of the Data on JMPS
 - Available to mission planner as a data set that can be used within a planning session



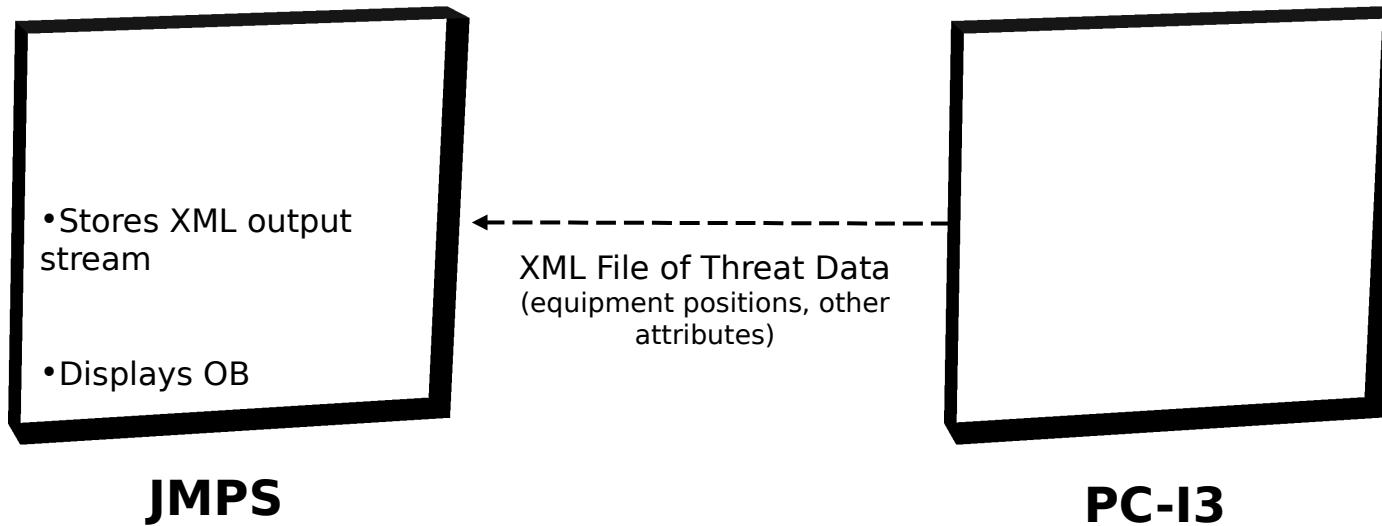
JC1 Implementation (Navy CONOPS)



Note: The only change between JV1 and JC1 is the low-level packaging of the request and the addition of BE_NUMBER and CATEGORY as attributes requested and stored by JMPS.



JC1 Implementation (Air Force CONOPS)



Note: The only change between JV1 and JC1 is that BE_NUMBER and CATEGORY are stored by JMPS.



GCCS-M 4.X Schedule



GCCS-M 4.X

GCCS-M 4.X	FY 01			FY 02			FY 03			FY 04			FY 05											
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4									
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	
	CY 01			CY 02			CY 03			CY 04			CY 05											
4.X Milestones																								
Fleet Release Decision																								
4.X Development																								
DII COE Tiger Team																								
Developer Build Integration																								
Developer Build Integration																								
Developer Build Integration																								
Developer Build Integration																								
4.X DT&E Events (Lab)																								
Segment/Build Submission Deadline																								
Configure Lab/Install																								
DTRR																								
DT&E (Test)																								
DT&E (Test/Fix)																								
4.X Certifications (Lab)																								
NCTSI/J ITC Interoperability Testing																								
Security Testing (CT&E and BETA-I)																								
IATO																								
4.X DT&E Events (Afloat)																								
Hardware IRR																								
Hardware Install																								
Software IRR																								
Software Install																								
SOVT Readiness Review																								
SOVT																								
Segment Submission Deadline (Pri 1/2)																								
DTRR																								
DT&E																								
4.X Certifications (Afloat)																								
Security Testing (ST&E and BETA-II)																								
ATO																								
4.X OT&E Events																								
OTRR																								
IOT&E																								

Legend:

- Black square: Milestone
- Orange square: Task
- Green triangle: DT&E Event
- Blue triangle: Certification
- Purple triangle: OT&E Event
- Yellow triangle: Fleet Release Decision

4.X MS "C"

Note: Afloat DT on USS Wasp scheduled for April 2003.



GCCS-M Future Plans

- Transition to new GCCS-M CDE XML interface
 - Currently under development
- Eliminate the XMLSearch interface
 - Agreement to maintain the XMLSearch interface as long as JMPS requires it

Systems Engineering Team Participation?



JMPS/GCCS-M Interface Issues



- DAL changes due to security
 - Username and password
 - Certificate
- Installation of GCCS-M 4.X DAL for operational use
 - JC1 risk #178
 - Formal letter from PMA-233 being worked
- Availability of GCCS-M 4.X software
 - GCCS-M Software MOA in place
 - Jan 02 version being used for JV1 development and JV1/JC1 test
 - Version with DAL security changes is not yet available



JMPS/NAVSSI Interface



JMPS/PTW Interface



JMPS/PTW Interface

- Requirement
 - Query and retrieval of the following PTW imagery and products:
 - Imagery (in NITF 2.0 Expanded Format)
 - Automated Target Acquisition (ATA) Images
 - Point Position Information Products (PPIP)
 - Target Area Model (TAM) Images*
 - Target Folders with Visual Targeting Aids (VTA) and/or ATA Images.
 - The PTW Interface also supports ATA product generation requests and the exporting of retrieved products to UPC directories

*Note: TAM Images will not be supported by PTW as of PTW 4.2



JMPS/PTW Interface



- PTW 4.1
 - Interfaces with JC1 in old CGI format
 - Patch ? Installed at IBAR China Lake
- PTW 4.1.1
 - Interfaces with JC1
 - old CGI format
 - new XML format
 - Not yet installed at IBAR China Lake



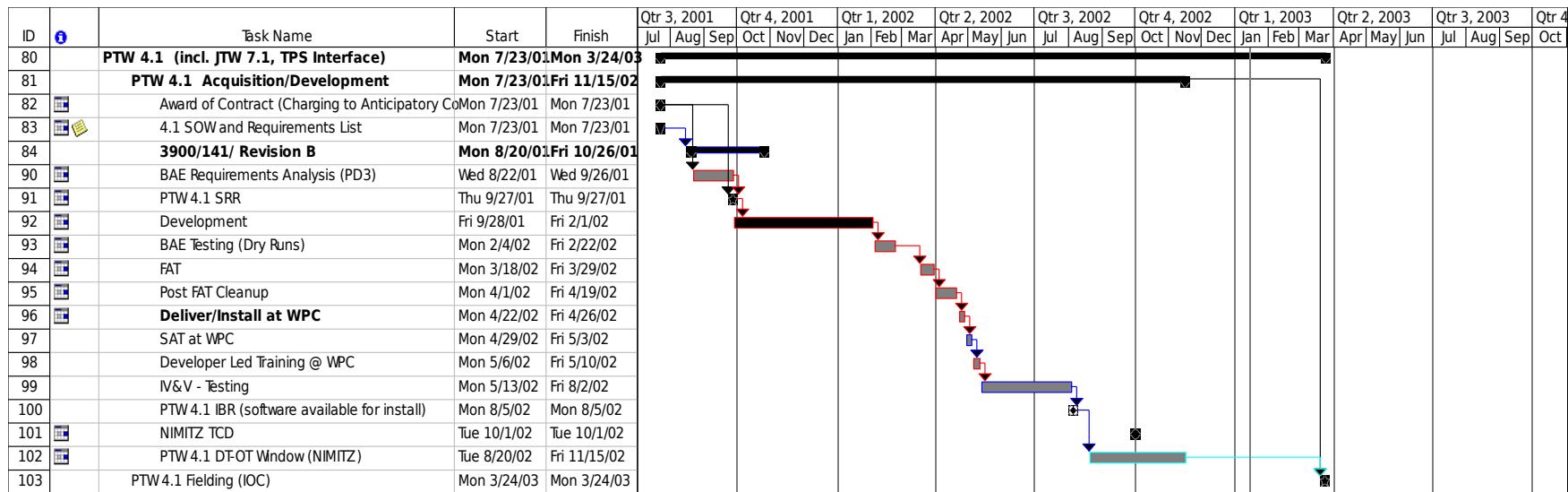
JMPS/PTW Interface Key Dates



- PTW 4.1.1 – 1/2/02->12/5/03
 - 4.1.1a – Nov 02 install at WPC
 - 4.1.1 – Mar 03 install at WPC
 - ETF Web
 - System Tasking (XML interface for JMPS)
- PTW 4.1 installs
 - TBD



PTW 4.1 Schedule



Last Schedule Revision –
9/19/02



PTW 4.1.1 Schedule

ID	Task Name	Start	Finish	Qtr 2, 2002		Qtr 3, 2002		Qtr 4, 2002		Qtr 1, 2003		Qtr 2, 2003		Qtr 3, 2003		Qtr 4, 2003		Qtr 1, 2004		Qtr 2, 2004		Qtr 3, 2004								
				Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
106	PTW 4.1.1 (incl. JTW 7.2, TTPV-IPTS integration)	Mon 4/1/02	Tue 2/10/04																											
107	PTW 4.1.1 Acquisition / Development	Mon 4/1/02	Mon 10/6/03																											
108	Award of Option (4.1.1 is an option under BOA)	Mon 4/1/02	Mon 4/1/02																											
109	SRR	Tue 6/4/02	Wed 6/5/02																											
110	Developer Initial Systems Engineering	Tue 4/2/02	Mon 6/10/02																											
111	Development	Thu 6/13/02	Wed 11/20/02																											
112	Systems Integration (4.1.1 a)	Mon 10/7/02	Fri 11/1/02																											
113	Deliver/Install at WPC (4.1.1 a)	Mon 11/4/02	Fri 11/8/02																											
114	TISPAT Testing for TC25	Mon 11/11/02	Fri 12/20/02																											
115	System Integration	Mon 11/25/02	Fri 1/31/03																											
116	FAT Dry Runs	Mon 2/3/03	Fri 2/14/03																											
117	FAT	Mon 2/17/03	Fri 3/7/03																											
118	Post FAT Cleanup	Mon 3/10/03	Fri 3/28/03																											
119	Deliver/Install at WPC	Mon 3/31/03	Fri 4/4/03																											
120	SAT at WPC	Mon 4/7/03	Fri 4/11/03																											
121	Developer Led Training at WPC	Mon 4/14/03	Fri 4/18/03																											
122	IV&V - Testing	Mon 4/21/03	Fri 7/11/03																											
123	PTW 4.1.1 IBR	Mon 7/14/03	Mon 7/14/03																											
124	PTW 4.1.1 DT - OT Window	Tue 7/15/03	Mon 10/6/03																											
125	PTW 4.1.1 Fielding (IOC)	Tue 2/10/04	Tue 2/10/04																											
126	Support JTT/GCCS-M/PTW Opeval	Mon 1/6/03	Tue 9/28/04																											

Last Schedule Revision –
9/19/02



PTW 4.2 Schedule



ID	Task Name	Start	Finish	Qtr 1, 2003			Qtr 2, 2003			Qtr 3, 2003			Qtr 4, 2003			Qtr 1, 2004			Qtr 2, 2004			Qtr 3, 2004			Qtr 4, 2004			Qtr 1, 2005			Qtr 2, 2005		
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr		
127	PTW 4.2 Acquisition/Development	Mon 1/6/03	Mon 5/24/04																														
128	AOC	Mon 1/6/03	Mon 1/6/03																														
129	PTW 4.1.2 Development	Tue 1/7/03	Tue 1/7/03																														
130	Development	Mon 1/6/03	Fri 9/26/03																														
131	BAE Testing	Mon 9/29/03	Fri 10/17/03																														
132	FAT	Mon 10/20/03	Fri 10/31/03																														
133	Install at WPC	Mon 11/24/03	Thu 11/27/03																														
134	Developer Training	Fri 11/28/03	Thu 12/4/03																														
135	IV&V - Testing	Fri 12/5/03	Thu 2/26/04																														
136	PTW 4.2 IBR	Mon 3/1/04	Mon 3/1/04																														
137	PTW 4.2 DT-OT Window	Tue 3/2/04	Mon 5/24/04																														
138	PTW 4.2 Fielding	Tue 9/28/04	Tue 9/28/04																														

Last Schedule Revision –
9/19/02

Note: TAM Images will not be supported by PTW as of PTW 4.2



PTW External Schedule Drivers



ID	Task Name	Start	Finish	Qtr 2, 2000			Qtr 3, 2000			Qtr 4, 2000			Qtr 1, 2001			Qtr 2, 2001			Qtr 3, 2001			Qtr 4, 2001			Qtr 1, 2002			Qtr 2, 2002			
				Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
171	External Schedule Drivers	Mon 4/3/00	Wed 6/23/00				*			*			*			*			*			*			*						
172	TAMPS	Wed 8/1/01	Wed 8/1/01				*			*			*			*			*			*			*						
173	TAMPS 6.2.1/JTM	Wed 8/1/01	Wed 8/1/01																												
174	JTT	Thu 3/1/01	Mon 9/3/01																												
177	VISUAL SERVICES	Wed 5/17/00	Fri 7/25/03																												
223	External Tests	Fri 6/1/01	Wed 6/23/04																												
224	SHARP OA	Mon 3/11/02	Fri 4/26/02																												
225	TIS Test on Nimitz	Fri 8/2/02	Thu 10/3/02																												
226	SHARP Techeval	Mon 1/6/03	Fri 3/28/03																												
227	SHARP Opeval	Tue 5/13/03	Mon 6/9/03																												
228	GCCS-M 4.x (Roosevelt)	Fri 6/1/01	Fri 6/1/01																												
229	GCCS/JTT/PTW Opeval	Thu 4/1/04	Wed 6/23/04																												
230	Common Data Client	Thu 11/30/00	Wed 2/21/01																												
231	Implement CDC on Coronado for FBE-I	Thu 11/30/00	Wed 2/21/01																												
232	NSWPC SPF	Wed 11/15/00	Wed 5/15/02																												
233	SPF build #3	Wed 11/15/00	Wed 11/15/00																												
234	SPF build #4	Tue 5/15/01	Tue 5/15/01																												
235	SPF build #5	Thu 11/15/01	Thu 11/15/01																												
236	SPF build #6	Wed 5/15/02	Wed 5/15/02																												
237	DII COE	Mon 4/3/00	Sun 4/1/01																												
238	DII COE 4.2	Mon 4/3/00	Mon 4/3/00																												
239	DII COE 4.3	Mon 10/2/00	Mon 10/2/00																												
240	DII COE 4.4	Sun 4/1/01	Sun 4/1/01																												
241	Broadsword	Mon 1/15/01	Mon 1/15/01																												
242	V3.0	Mon 1/15/01	Mon 1/15/01																												
243	Misc Activities	Mon 8/28/00	Mon 9/18/00																												
244	DII COE Studies	Mon 8/28/00	Mon 9/18/00																												

Last Schedule Revision -
9/19/02



PTW Future Plans

- JMPS interface
 - Old CGI interface phased out as TAMPS dies out
 - At this point, PTW will only support the new XML interface
- Other
 - Joint Targeting Toolkit (JTT) requests accurately mensurated points from PTW
 - PTW 4.1.1 accomplishes this via a file directory
 - PTW 4.2 looking at an XML interface similar to JMPS
 - JAWS
 - Dynamic Target Management Service (DTMS)



JMPS/PTW Interface Issues

- Availability of PTW 4.1.1 software
- Installation of PTW 4.1.1 for operational use
- Usability of PTW imagery by the JMPS NITF Viewer provided by Autometric



JMPS/SPF Interface

Note: The following set of slides are from CDR Buck's NSWPC IPT Briefing, 10 Jan 03.



NSWPC Purpose/Charter

**ENHANCE CVBG
TACAIR and Tomahawk
Strike Warfare Capabilities**
**BY INTEGRATING CVIC
Mission Planning and
Intelligence Systems**
THROUGH USE OF SCN FUNDS
RCOH and New Construction

**"JOINT VISION 2010" → Network-Centric
Warfare**

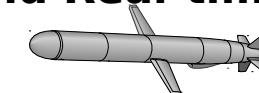


Phase I (FY97-01)

- More planning time
- Less "admin" time

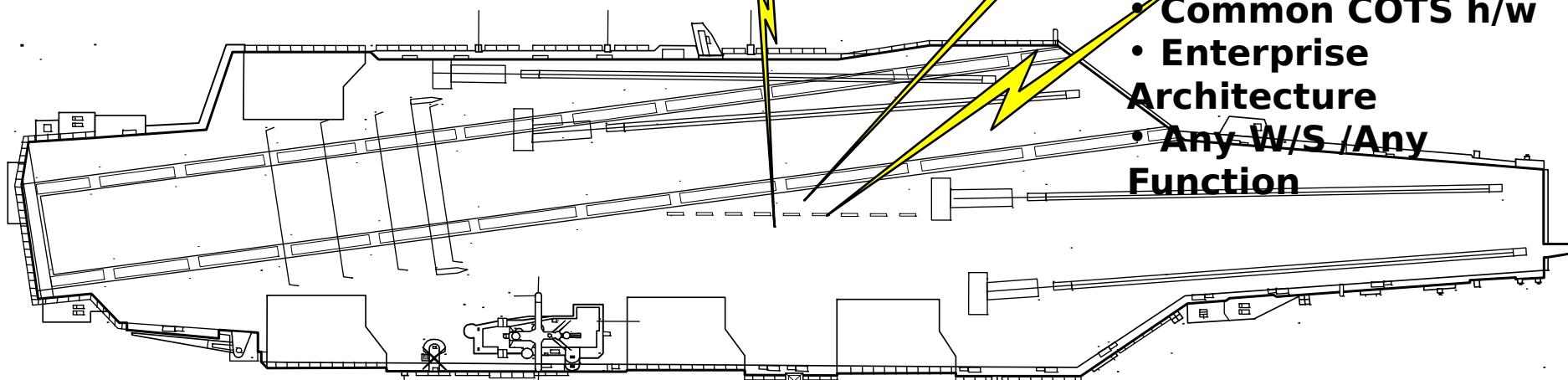
Phase II (FY98-03)

- Time-critical Strike
- Rapid Real-time Retarget



Phase III (FY02-07)

- Common COTS h/w
- Enterprise Architecture
- Any W/S /Any Function

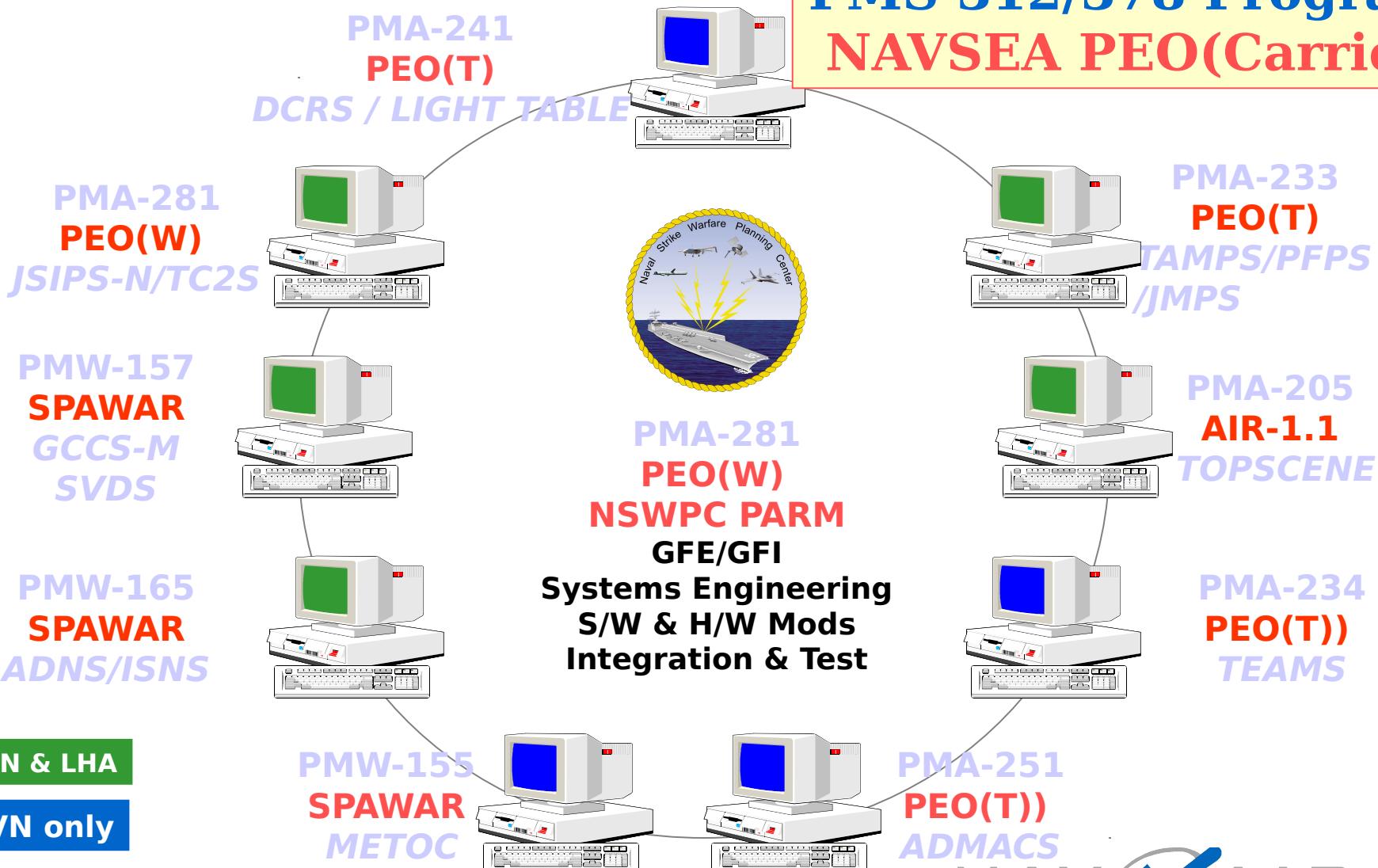


**Allow decision-makers to manage information more efficiently
and effectively**



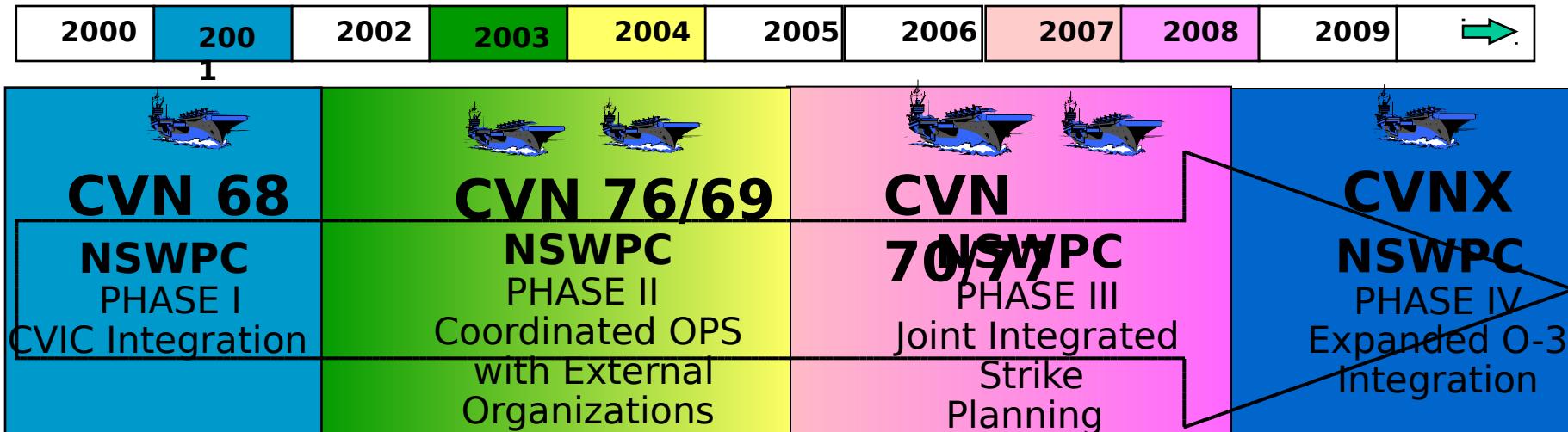
NSWPC IPT

PMS 312/378 Program
NAVSEA PEO(Carriers)





NSWPC Integration Approach



NSWPC Capabilities

<ul style="list-style-type: none">• Single CVBG• Within CVN hull• Unit through CAG/STK OPS• Focus on information management	<ul style="list-style-type: none">• Multiple CVBG• Accompanying ARG/MEU• In-theater AF units• Focus on liaison and coordination with taskers and other theater units• STWC Support	<ul style="list-style-type: none">• Convergence of NAVAIR systems• Common COTS H/W for CVIC• Enterprise Architecture	<ul style="list-style-type: none">• Integrated CVN Warfare System<ul style="list-style-type: none">• Expand COTS Based H/W for O-3 level
--	--	--	--

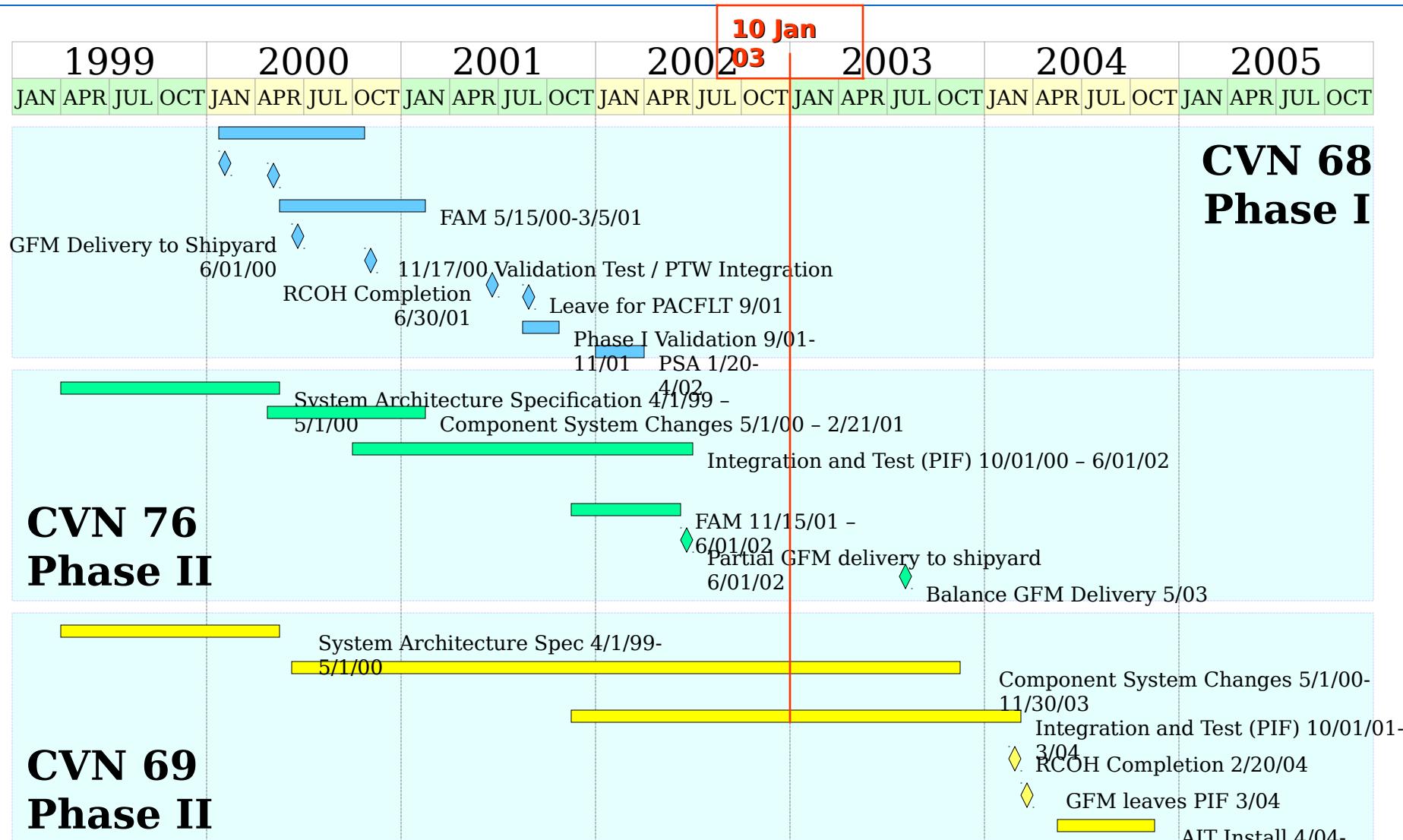


Major Events

- 7-9 Oct 02 TOPSCENE delivered and installed
- 8-10 Oct 02 CVN 69/70 PARM Tech Summit
- 21 Oct 02 TIS 1.5 delivered to PIF
- 12 Nov 02 CVN 69/70 QPR
- 19 Nov 02 CVN 77 Plus Up Briefing
- 4 Dec 02 CVN 77 Tech Summit
- 20 Dec 02 SPF BLD 7 delivered to PIF
- 16 Dec 02 System of System Exit Brief
- 7-9 Jan 03 SPF SAT

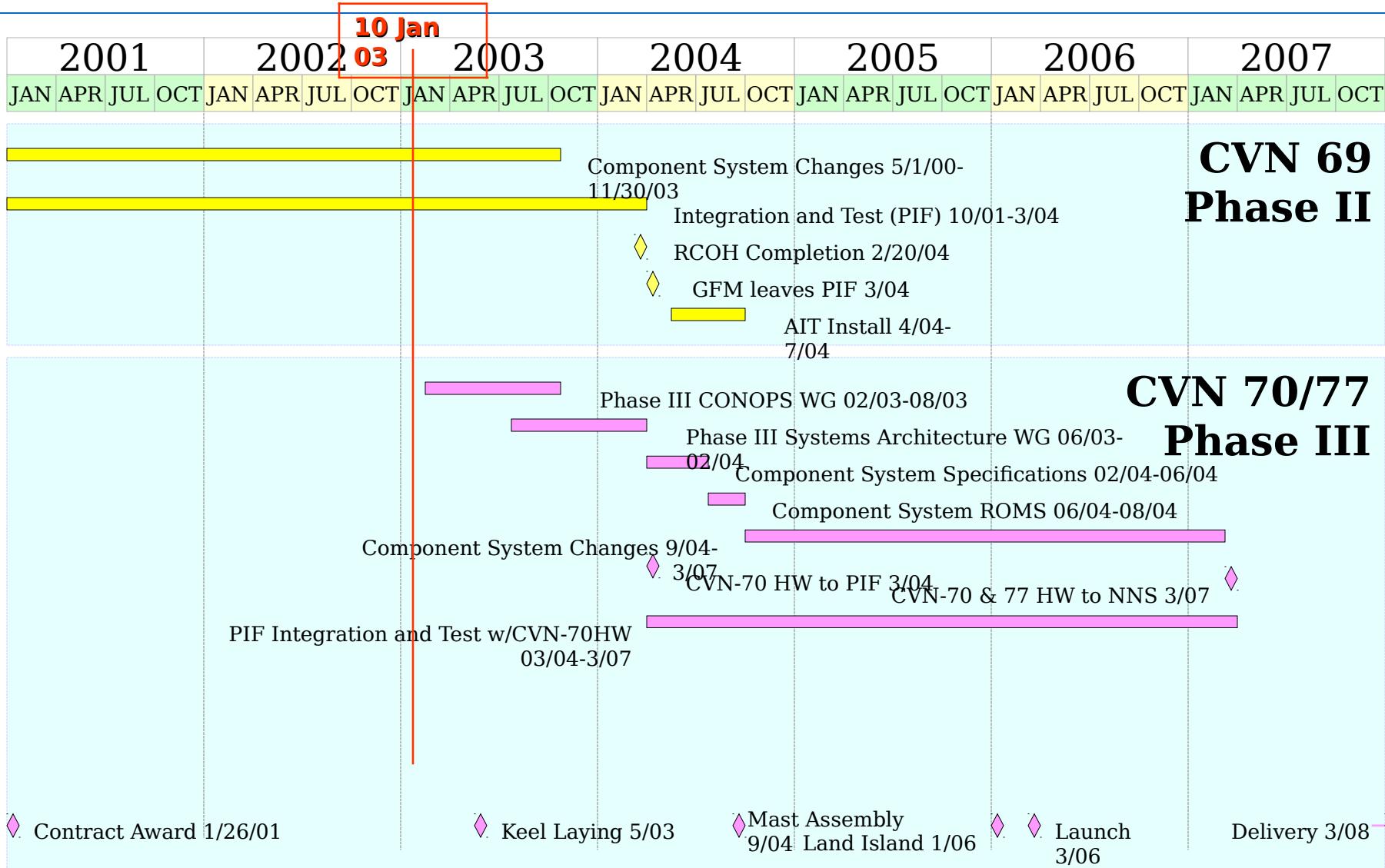


Current NSWPC Schedules



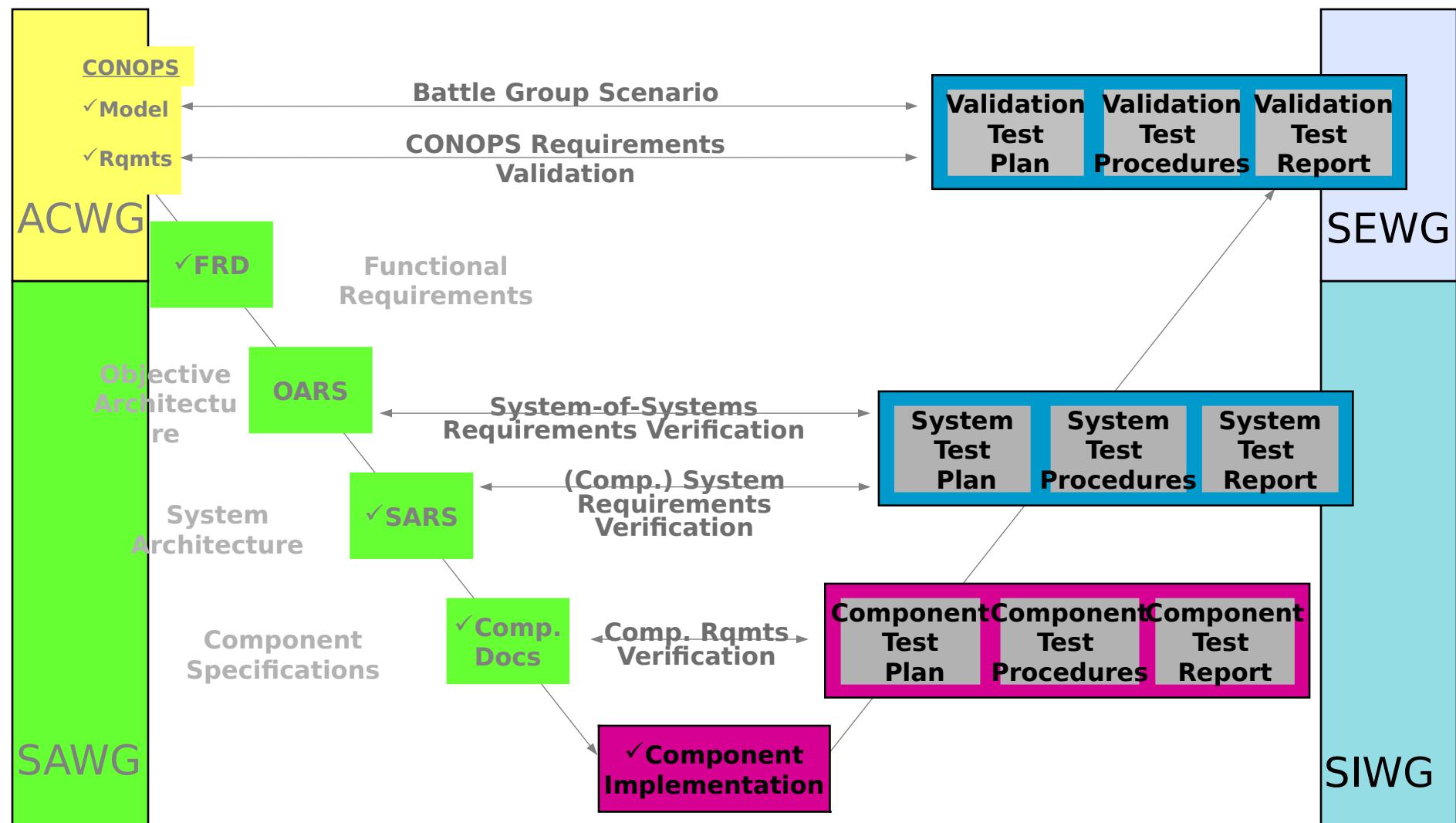


NSWPC Schedule & CVN 21





NSWPC Requirements Process Phase III (CVN 70/77)





SPF Build 7/8/9 Status

- Scheduled releases
 - Dec '02 (B7)
 - Jun '03 (B8)
 - Nov '03 (B9)
- Build 7
 - Delivered to PIF
 - Installed on stand alone server until PTW 4.1.1 is available
 - Testing has started
- Build 8/9
 - Contract Awarded
 - Work Commencing



FY03 SPF Events



<input checked="" type="checkbox"/>	02 Dec 02	SPF Build 7 Test Readiness Review
<input checked="" type="checkbox"/>	02-06 Dec 02	SPF Build 7 FT and IT
<input checked="" type="checkbox"/>	20 Dec 02	SPF Build 7 Delivery
<input checked="" type="checkbox"/>	23 Dec 02	SPF Build 8/9 Contract Award
<input checked="" type="checkbox"/>	06-07 Jan 03	SPF Build 7 PIF Installation
<input type="checkbox"/>	07-10 Jan 03	SPF Build 7 SAT and SIT
<input type="checkbox"/>	13 Jan-Mar 03	SPF Build 7 Integration and Test
<input type="checkbox"/>	17 Mar 03	SPF Build 8 Design Review
<input type="checkbox"/>	02 Jun 03	SPF Build 8 Test Readiness Review
<input type="checkbox"/>	03-06 Jun 03	SPF Build 8 FT and IT
<input type="checkbox"/>	13 Jun 03	SPF Build 8 Delivery
<input type="checkbox"/>	16-17 Jun 03	SPF Build 8 PIF Installation (Tentative)
<input type="checkbox"/>	17-20 Jun 03	SPF Build 8 SAT and SIT (Tentative)
<input type="checkbox"/>	23 Jun 03	SPF Build 10/11 Contract SOW First Draft (Notional)
<input type="checkbox"/>	23 Jun-Aug 03	SPF Build 8 Integration and Test (Tentative)
<input type="checkbox"/>	21 Jul 03	SPF Build 10/11 Contract SOW Final Draft (Notional)
<input type="checkbox"/>	19 Aug 03	SPF Build 9 Design Review
<input type="checkbox"/>	25 Aug 03	SPF Build 10/11 Contract Award (Notional)



SPF Build 7 Tasks



- **TMS DTG**
- **ATO Search**
- **File Description Edit**
- **Global Data Archive**
- **Data “Valving”**
- **Overlay Route Display**
- **Multiselect**
- **Member Roles**
- **Rubber Band Zoom**
- **ATO Validation Warning**
- **Strike Timeline Tool**
- **Enhanced Map Loader**
- **Text Highlighting**
- **Tanking Correlation**
- **User Preference**
- **IFF Mode 4**
- **SEAD Node**
- **Folder Origination**
- **Origination Help**
- **Origination Admin**
- **Survivor Card**
- **CSAR Additions**
- **Mission Type**
- **Single Target**
- **ATO Text Search**
- **ACO View**
- **Folder Search**
- **User comment collection**
- **Route Colors**
- **ATO 2000 Parsing**
- **Expanded Kneeboard Card**
- **METOC Interface**
- **Multi-table Access**
- **TBMCS I/F Design**



SPF Build 7 Tasks

- **Auto Generation of Post Strike Intelligence Data**
- **ISIS Airplan Import**
- **DMPI Correlation Investigation**
- **Extended DAFIF Displays**
- **Drive to Location**
- **Center on Entity**
- **Arrow Drawing Tool**
- **IFL Report**
- **ESRI GIS Shape Files**
- **Improve Map Load**
- **Proportional Text**
- **Map Refresh Button**
- **Help Cut & Paste**
- **Map Tool Colors**
- **Range/Bearing Tool**
- **Auto-filling**
- **Direct Paste**
- **Element Card Kneeboard Card**
- **Lat/Long Copy/Paste**
- **STWC Domain**
- **TBMCS Interface**
- **ACE**



SPF Build 8/9 JMPS MB Tasks



- SPF JMPS Mission Binder
 - Provide for JMPS Mission Binder (MB) support.
 - Up to 2 JMPS MB build deliveries during each SPF Build. Mission Binder Build schedules will be determined by the Government.



SPF Build 8 Specific Tasks



- ATO/ACO handling enhancements
- Host platform/server tasks
- User communication improvements
- Time display improvements
- Required security improvement
- General usability improvement
- Basic improvements
- Error handling and robustness improvements
- Security improvements
- Engineering studies for future enhancements



SPF Build 9 Specific Tasks



- ATO/ACO handling enhancements
- Security improvements
- Timeline Tool improvements
- Map Loader improvements
- GCCS interface improvements and enhancements
- User friendliness improvements
- Strike Warfare Commander improvements
- Map Tool enhancement
- User communication improvement
- Engineering studies for exploring future enhancements



SPF Build 10+ (Tentative)



- External System Configuration Encapsulation Implementation
- Componentization Implementation
- SPF Update Notification Implementation
- SPF Data Synchronization Implementation
- SPF JMPS UPC Interface Implementation
- Full SPF DB for JMPS Implementation
- Enterprise Architecture Implementation
- TC2S Integration Implementation
- Copy Commands Standardization
- Upgrade PTW/SPF Interface to Use XML
- Electronic Import of ADMACS Airplan



JMPS/WXI (METCAST) Interface



Summary



Summary

- External Interface
 - System/Data that is not packaged as part of JMPS Framework, Common Components, or UPCs
- External Dependencies
 - Within each external interface, there can be dependencies
- External Interface ‘Virtual’ Team
 - Ancina is the Cat Herder
 - Various NAVAIR team members are the SMEs
 - Tester may or not be the technical SME
- Why worry about External Interfaces?
 - Ultimately, the JMPS user will suffer if we don't
 - Potential failure during OT



In case we forget what we plan for...

